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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,890	10/30/2003	Michiaki Sekine	NIT-399	9688
7590 10/04/2005 Mattingly, Stanger & Malur, P.C. Suite 370 1800 Diagonal Road Alexandria, VA 22314			EXAMINER KIM, HONG CHONG	
			ART UNIT 2186	PAPER NUMBER

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/695,890

Applicant(s)

SEKINE ET AL.

Examiner

Hong C. Kim

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/30/03 &amp; 4/19/05</u> . | 6) <input type="checkbox"/> Other: _____  |

1d

**Detailed Action**

1. Claims 1-9 are presented for examination. This office action is in response to the application filed on 10/30/2003.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 10/30/03 and 4/19/05 are is being considered by the examiner.

***Specification***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title should be more specific to differentiate the invention from similar inventions in the patent literature. "Virtually emulate a tape unit on a disk drive", and "copy function" aspects of the invention should be mentioned in the title so that the title is more descriptive.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (Yamamoto) U.S. Patent No. 6,701,455 in view of Moon et al. (Moon) U.S. Patent Pub. No. 2002/0144044 or Tatsuya et al. (Tatsuya) JP 11-272426.

As to claim 1, Yamamoto discloses a method for remote copy management in a system on a disk drive, comprising: a step of creating data on said disk drive; and a step of transferring said data to another system by a file copy function between disk drives.

However, Yamamoto does not specifically disclose virtually emulates a magnetic tape unit on a disk drive.

Moon discloses virtually emulates a magnetic tape unit on a disk drive (block 12) for the purpose of providing high speed data access operation (block 12).

Alternatively, Tatsuya discloses virtually emulates a magnetic tape unit on a disk drive (Problem to be solved) for the purpose of providing high speed data access operation (Problem to be solved).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate virtually emulates a magnetic tape unit on a disk drive as taught by Moon or Tatsuya into the system of Yamamoto for the advantages stated above.

As to claim 2, Yamamoto, Moon, and Tatsuya disclose the invention as claimed. Yamamoto further discloses wherein said disk drive is a magnetic disk drive (col. 3 lines 37, hard disk drives), and said transfer is performed so as to be asynchronous to the system (col. 4 line 47).

As to claims 3 and 9, Yamamoto, Moon, and Tatsuya disclose the invention as claimed. Yamamoto further discloses a first system (Fig. 1 Ref. 100) and a second system (Fig. 1 Ref. 101). Tatsuya further discloses a first system and a second system (Problem to be solved).

As to claim 4, Yamamoto, Moon, and Tatsuya disclose the invention as claimed. Yamamoto further discloses wherein prior to said transfer, said virtual tape unit is exclusively controlled for each virtual tape volume, and said first and second virtual tape files are exclusively controlled for each file (separate disk control systems, Refs 106 and 107 reads on this limitation).

As to claim 5, Yamamoto, Moon, and Tatsuya disclose the invention as claimed. Moon further discloses wherein said second system further has a tape using task execution part, said tape using task execution part gives a virtual tape input request of said first system, and said transfer is performed based on said input request (blocks 89 and 90).

As to claim 6, Yamamoto, Moon, and Tatsuya disclose the invention as claimed. Moon further discloses wherein said first virtual tape transfer processing unit monitors an expiration date of said transferred virtual tape file, and gives a returning request when the expiration date is expired (col. 6 lines 39+, notification and col. 9 line 11, limit time schedule).

***Allowable Subject Matter***

6. Claims 7-8 are allowed.

***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.
2. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).
3. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show

how the amendments avoid such references or objections. See 37 C.F.R. ' 1.111(c).

4. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Kim whose telephone number is (571) 272-4181. The examiner can normally be reached on M-F 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 whose telephone number is (571) 272-2100.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**7. Any response to this action should be mailed to:**

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to TC-2100:**

571-273-8300

Hand-delivered responses should be brought to the Customer Service Window (Randolph Building, 401 Dulany Street, Alexandria, VA 22314).

HK  
Primary Patent Examiner  
September 30, 2005

